September 9, 2003

Mr. Peter S. Hastings
Manager, Licensing and Safety Analysis
Duke Cogema Stone & Webster
P.O. Box 31847
Mail Code FC12A
Charlotte, NC 28231-1847

SUBJECT: AUGUST 2003 MONTHLY OPEN ITEM STATUS REPORT

Dear Mr. Hastings:

The purpose of this letter is to update Duke Cogema Stone & Webster (DCS) on the status of the U.S. Nuclear Regulatory Commission's (NRC's) review of the Mixed Oxide Fuel Fabrication Facility Construction Authorization Request (CAR). The report covers the status through August 31. The Monthly Open Item Status Report sent to you via letter dated August 5 was actually the July report since it covered the status for July, including the results of the July 29-August 1 meeting. It was mislabeled as the August report.

The attached table provides the status of the staff's review of open items. The table contains the 19 open items identified in Appendix A of the April 30, 2003, Draft Safety Evaluation Report (DSER). The figure showing the closure of open items since April 2002 has been retained and shows the disposition of the original 66 open items.

More information about some of the items in this report are provided in separate meeting summaries.

Sincerely,

/RA/

Andrew Persinko, Sr. Nuclear Engineer
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

cc: J. Johnson, DOE
H. Porter, SC Dept. of HEC
J. Conway, DNFSB
L. Zeller, BREDL
G. Carroll, GANE
D. Curran, Esq.,GANE
D. Silverman, Esq., DCS

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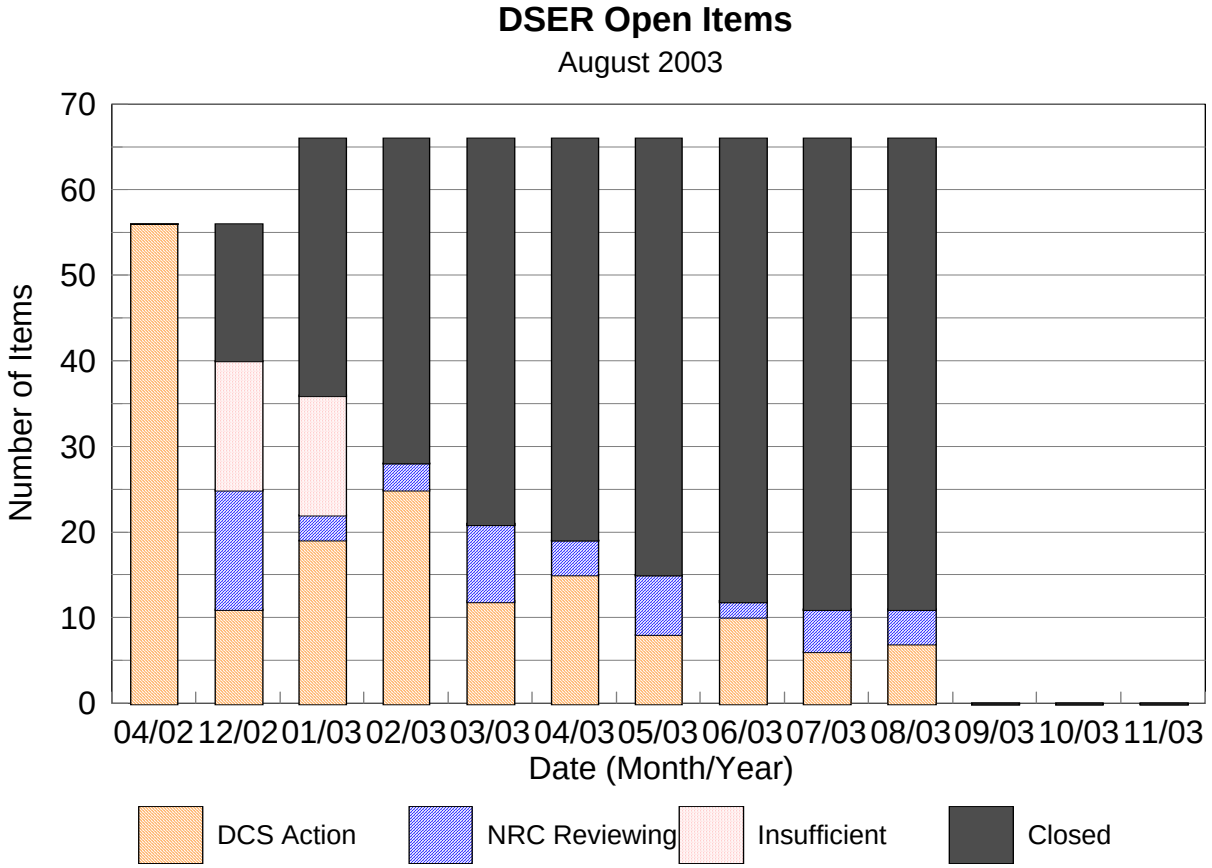
NRC Monthly Open Item Status Report: Mixed Oxide Fuel Fabrication Facility Construction Authorization Request

Status of Open Items since the NRC's Draft Safety Evaluation Report was issued on April 30, 2002.



NRC Monthly Open Item Status Report: MFFF Construction Authorization Request

Category 1) DCS action to address = OPEN
Category 2) DCS addressed, Staff reviewing = OPEN
Category 3) CLOSED - DCS addressed, Staff accepts

Item No.	DSER Section	DSER Open Item Description	DCS Response	NRC Finding / Estimated Review Completion Date	Current Status
FQ-1	2.0	Provide information on project design costs. (Revised DSER Section 2.1.1)	2/18/03 letter	Acceptable per SRP § 2.4.3	CLOSED
FQ-2	2.0	Update financial statements (Revised DSER Section 2.1.2)	2/18/03 letter	Acceptable per SRP § 2.4.3	CLOSED
NCS-4	6.0	Determination of Design Basis USLs for each process type, and determination of normal condition subcritical margin. Clarification of DCS' commitment to the preferred use of dual parameter control. (DSER Section 6.1.3.4.2 and 6.1.3.5.1)	Revised CAR 6.0 01/16/03 meeting 03/20/03 meeting 06/13/03 letter 06/25/03 RAI 7/29/03 letter 8/1/03 letters 7/29-8/1/03 meeting	NRC reviewing 09/30/03	OPEN
FS-1	7.0	The ability of the final C4 and C3 HEPA filters to perform their safety function when considering soot loading, has not been adequately demonstrated (DSER Section 7.1.5.5)	2/18/03 letter 4/10/03 letter	Acceptable per SRP § 7.4.3	CLOSED
FS-2	7.0	The margin of safety of the fire barriers has not been adequately resolved. (DSER Section 7.1.5.6)	CAR 7.4 2/6-7/03 meeting 2/18/03 letter 5/14/03 letter 8/1/03 meeting	Acceptable per SRP § 7.4.3	CLOSED

NRC Monthly Open Item Status Report: MFFF Construction Authorization Request

Category 1) DCS action to address = OPEN
Category 2) DCS addressed, Staff reviewing = OPEN
Category 3) CLOSED - DCS addressed, Staff accepts

Item No.	DSER Section	DSER Open Item Description	DCS Response	NRC Finding / Estimated Review Completion Date	Current Status
CS-1	8.0	The staff concludes that the red oil phenomena analysis in Chapter 5.5 of the CAR is not complete and that PSSCs and their design bases for preventing red oil explosions are not adequate for all potentially affected components. At a minimum, this applies to the following areas: purification, solvent recovery, calciner, oxalic mother liquor, acid recovery, and offgas. (DSER Section 8.1.2.5.2.5)	CAR 5.5.2.4.6.7 CAR 8.5 2/7/03 Meeting 4/8/03 CAR page changes 6/2-4/03 meeting 7/29-8/1 meeting	NRC reviewing 9/30/03	OPEN
CS-2	8.0	The staff concludes that the HAN/hydrazine analysis in Chapter 5.5 of the CAR is not complete and that PSSCs and their design bases for preventing HAN/hydrazine explosions are not adequate for all potentially affected units and components. At a minimum this applies to the following areas: purification event, recovery, offgas. (DSER Section 8.1.2.5.3.2)	CAR 5.5.2.4.6.4 CAR 8.5.1.3 05/30/03 letter 06/2-4/03 meeting 7/28/03 letter 7/29-8/1/03 meeting	DCS Action	OPEN
CS-3	8.0	The staff concludes that the HAN/hydrazine analysis in Chapter 5.5 of the CAR is not complete and that PSSCs and their design bases for preventing azide formation and potential explosions are not adequate for all potentially affected units and components. (DSER Section 8.1.2.5.3.3)	CAR 5.5.2.4.6.10 CAR 5.5.2.4.6.11 CAR 8.5.1 05/23/03 letter	Acceptable per SRP § 8.4.3	CLOSED
CS-5b	8.0	Rather than reference TEEL levels, numerical values for which are subject to frequent updates and changes, provide commitment to and justification for specific hazardous chemical concentrations (or other exposure values) to meet 70.61 performance requirements.	2/18/03 letter	NRC reviewing 9/30/03	OPEN
		Additional information on indoor windspeed values needed.	02/18/03 letter 6/2-4/03 meeting	Acceptable per SRP § 8.4.3	CLOSED

NRC Monthly Open Item Status Report: MFFF Construction Authorization Request

Category 1) DCS action to address = OPEN
Category 2) DCS addressed, Staff reviewing = OPEN
Category 3) CLOSED - DCS addressed, Staff accepts

Item No.	DSER Section	DSER Open Item Description	DCS Response	NRC Finding / Estimated Review Completion Date	Current Status
CS-9	8.0	The applicant has not provided a solvent temperature design basis with sufficient margin. (DSER Section 8.1.2.5.2.2)	See AP-2	DCS action	OPEN
CS-10	8.0	A suitable design basis for habitability in the Emergency Control Room has not been identified. (DSER Section 8.1.2.6.1)	CAR 11.4.11.1.16 2/18/03 letter 06/2/4/03 meeting 7/29-8/1 meeting 7/28/03 letter	NRC reviewing 9/30/03	OPEN
AP-2	11.2	With respect to the electrolyzer, the applicant's hazard and accident analysis did not consider fires and/or explosions caused by ignition of flammable gases generated by chemical reactions and/or electrolysis, such as from an overvoltage condition. This applies to the dissolution and silver recovery units (DSER Sections 11.2.1.3.3)	CAR 5.5.2.4.6.13 1/15/03 meeting 2/18/03 letter 7/29-8/1/03 meeting	DCS action	OPEN
AP-3	11.2	The applicant's hazard and accident analysis did not include events involving titanium, such as titanium fires. Accident events should be evaluated and PSSCs identified as necessary. This applies to the dissolution and silver recovery units (DSER Sections 11.2.1.2 and 11.2.1.3.4)	CAR 7.2.2 2/6-7/03 meeting 5/23/03 letter 6/2-4/03 meeting 7/28/03 letter 7/29-8/1/03 meeting	DCS action	OPEN
AP-7	11.2	Parameters have not been identified for the plutonium feed to the facility. PSSCs and design bases should be identified for this feed material or a justification provided that it is not necessary (DSER Section 11.2.3.1)	CAR 11.3.7	Acceptable per SRP § 8.4.3	CLOSED
AP-8	11.2	A design basis and PSSCs are needed for flammable gases and vapors in the Offgas unit (DSER Section 11.2.1.3.10)	See AP-2	DCS action	OPEN

Item No.	DSER Section	DSER Open Item Description	DCS Response	NRC Finding / Estimated Review Completion Date	Current Status
AP-9	11.2	A design basis and PSSCs are needed for maintaining temperatures below the solvent flashpoint (DSER Section 11.2.1.3.10)	See AP-2	DCS action	OPEN
AP-10	11.2	Provide a design basis and PSSCs for removal of potentially toxic or reactive gases in the Offgas unit (DSER Section 11.2.1.3.10)	5/30/03 letter	Acceptable, per SRP §8.4.3	CLOSED
MP-1	11.3	PSSC and design basis information associated with the pyrophoric nature of some UO_2 powders (DSER Section 11.3.1.2.1)	CAR 8.5.1.6 2/18/03 letter 7/29-8/1//03 meeting	DCS action	OPEN
VS-1	11.4	Justify the use of a leak path factor of 1E-4 for two banks of HEPA filters under accident conditions (DSER Section 11.4.1.3)	02/18/03 letter	Acceptable, per SRP §11.4.5.2	CLOSED

Narrative of Open Items, August 2003

NCS-4. Per the discussion at the July 29-August 1, 2003, meeting, NRC will continue its review of the validation report.

CS-1. Per the discussion at the July 29-August 1, 2003, meeting, staff found DCS' approach to be acceptable. However, staff continues to review the design basis temperature for the solution (122.4 degrees C vs. 125 degrees C). DCS to identify PSSCs to assure evaporative cooling.

CS-2. Following an in-office review conducted by NRC on August 20, 2003, DCS committed to correcting information and equations that support design basis information provided May 30, 2003, and July 29, 2003.

CS-5b. NRC continues to review DCS's proposal to use TEELs as chemical consequence levels of concern.

CS-9, AP-2, AP-8, and AP-9. Per the discussion at the July 29-August 1, 2003, meeting, DCS should describe the interlocks that it is proposing to use to justify using 60% and 50% of the LFL per NFPA 69; DCS should also provide the PSSCs and their design basis functions and values.

CS-10. CAR Table provided by DCS found acceptable. Per the discussion at the July 29-August 1, 2003, meeting, staff to review PSSCs identified by DCS with respect to self-contained breathing apparatus (SCBA).

AP-3. Per the discussion at the July 29-August 1, 2003, meeting, DCS to provide details about the circuit breaker that it proposes to use to assure that the titanium is protected from reaching a temperature that would result in a phase change of the titanium.

MP-1. Staff has de-coupled this open item from FS-1, which is closed. Per the discussion at the July 29-August 1, 2003, meeting, DCS to determine if the HEPA filters would be damaged by the uranium burnback hazard. Staff continues to review information provided by DCS at the meeting.